

CLAIMS:

1. A DNA sequence encoding the human IL-18BP promoter (SEQ ID NO:1), or a fragment or a functional derivative thereof wherein the 3' end of said DNA sequence or fragment thereof comprises one or more nucleotides from the 5' end of SEQ ID NO: 5 .
2. The DNA sequence according to claim 1, wherein the derivative is mutated at one or more AP1 sites present in a silencer element present in the sequence.
3. The DNA sequence according to claim 1, wherein the fragment comprises SEQ ID NO:2 .
4. The DNA sequence according to claim 1, wherein the fragment comprises SEQ ID NO:3.
5. The DNA sequence according to anyone of claims 1 to 4, further comprising an intron.
6. The DNA sequence according to claim 5, wherein the intron consists of the first intron of IL-18BP.
7. The DNA sequence according to anyone of the preceding claims, further containing a gene operatively linked to the IL-18BP promoter.
8. The DNA sequence according to claim 7, wherein the gene encodes IL-18BP.
9. The DNA sequence according to claim 7, wherein the gene encodes a heterologous protein.
10. The DNA sequence according to claim 9, wherein the heterologous gene encodes the luciferase gene.
11. The DNA sequence according to claim 9, wherein the heterologous gene encodes a protein selected from interferon-beta, TNF, erythropoietin, tissue plasminogen activator, granulocyte colony stimulating factor, manganese-superoxide

dismutase, an immunoglobulin, or fragment thereof, growth hormone, FSH, hCG, IL-18, hsLDLR and TNF receptor binding proteins.

12. A vector comprising a DNA sequence according to anyone of the preceding claims.

5 13. A host cell comprising a vector according to claim 12.

14. A host cell according to claim 13, being a mammalian cell.

15. A host cell according to claim 14, selected from CHO, WISH, HepG2, Cos, CV-1, HeLA, and Hakat U937 cells.

10 16. A method for the production of a recombinant protein comprising culturing a host cell according to anyone of claims 13 to 15 and isolating the recombinant protein produced.

15 17. A recombinant virus vector which comprises a portion of the virus genome, a DNA fragment encoding a gene of interest and a DNA fragment comprising a DNA sequence encoding the human IL-18BP promoter according to anyone of claims 1 to 6, operably linked to the gene of interest.

20 18. A recombinant virus vector according to claim 17, wherein the gene of interest is selected from interferon-beta, TNF, erythropoietin, tissue plasminogen activator, granulocyte colony stimulating factor, manganese-superoxide dismutase, an immunoglobulin, or fragment thereof, growth hormone, FSH, hCG, IL-18, hsLDLR and TNF receptor binding proteins.

19. A recombinant virus vector according to claim 17, wherein the portion of the virus genome belongs to an adeno associated virus.

20. A recombinant virus vector according to claim 17, wherein the portion of the virus genome belongs to a retrovirus.

25 21. A recombinant virus vector according to claim 20, wherein the retrovirus is selected from HIV, HFV, MLV, FIV and VSV.

22. A method of regulating cell specific expression of a gene of interest, comprising transducing a target mammalian cell with a vector according to anyone of claims 17 to 21 and transplanting such cell in an individual in need.
23. A method according to claim 22, wherein the target cell is an hematopoietic stem cell.
24. A method according to claim 22, wherein the target cell is a monocyte.
25. A method according to claim 24, wherein the target cell is a macrophage.
26. A method according to anyone of claims 22 to 25, wherein the gene of interest encodes a protein conferring resistance to HIV infection.
27. A method according to claim 26, for the treatment of HIV infection.
28. A method according to anyone of claims 22 to 25 for the treatment of hematopoietic disorders.
29. A method according to claim 28, wherein the hematopoietic disorder is selected from SCID, chronic granulomatous disease and thalasemia.
30. A method of gene therapy for the treatment of a disease in an individual exhibiting elevated IFN γ in a body tissue, comprising the administration of an effective amount of a vector according to anyone of claims 17 to 21.
31. A method according to claim 30 further comprising the administration of IL-6 and/or TNF- α and or IRF and or C/EBP β factors.
32. Transgenic mice harbouring the DNA sequence encoding a DNA sequence according to anyone of claims 1 to 11.
33. The use of a DNA sequence encoding the human IL-18BP promoter (SEQ ID NO:1), or a fragment or a functional derivative thereof wherein the 3' end of said DNA sequence or fragment thereof comprises one or more nucleotides from the 5' end of SEQ ID NO: 5, in the manufacture of a medicament for the treatment of a disease.
34. A pharmaceutical composition comprising a therapeutically effective amount of a DNA sequence encoding the human IL-18BP promoter (SEQ ID NO:1), or a

fragment or a functional derivative thereof wherein the 3' end of said DNA sequence or fragment thereof comprises one or more nucleotides from the 5' end of SEQ ID NO: 5.

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